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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,818	10/20/2003	Haim Weissman	030265	4377

23696 7590 08/01/2005

Qualcomm Incorporated  
Patents Department  
5775 Morehouse Drive  
San Diego, CA 92121-1714

EXAMINER
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DOAN, KIET M

ART UNIT	PAPER NUMBER
2683	

DATE MAILED: 08/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/689,818

**Applicant(s)**

WEISSMAN, HAIM

**Examiner**

Kiet Doan

**Art Unit**

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 9, 10, 14-17, 23, 24 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 4-8, 11-13, 18-22 and 25-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/22/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. **Claim 12** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding **claim 12**, the phrase "bandwidth is approximately" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

### ***Allowable Subject Matter***

2. **Claims 4-8, 11-13, 18-22 and 25-27** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Consider **claims 4 and 18**, prior art record Kawano teach the BTS according to claim 2, and comprising: a first duplexer which is adapted to receive the signals from the first group of wired telephone and to convey the signals to the main up-link port; a second duplexer which is adapted to receive the signals from the second group of wired telephones and to convey the signals to the diversity up-link port; and a down-link port which is adapted to convey down-link signals via the first duplexer(C4, L27-53, C5, L5-

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33, Fig.2, teach duplexer No.31-34 which receive signals via antenna No.30a/30b to the main up-link port). However, Kawano **fail to teach** and the CATV network to the first group of wired telephones and via the second duplexer and the CATV network to the second group of wired telephones, as substantially connect and specific detail and combination.

Consider **claims 5 and 19**, prior art record Kawano teach the BTS according to claim 2, and comprising a first down-link port which is adapted to transmit first down-link signals to the cellular telephones; a further main up-link port and a further diversity up-link port which are adapted to operate cooperatively to receive up-link signals over-the-air from cellular telephones such that both of the ports receive the up-link signals from each of the cellular telephones, and which are coupled to receive signals from the wired telephones (Abstract, C3, L10-20, L61-68, C4, L1-53). However, Kawano **fail to teach** such that the further main up-link port receives signals only from a third group of the wired telephones and the further diversity up-link port receives signals only from a fourth group of the wired telephones; a second down-link port which is adapted to transmit second down-link signals to the cellular telephones; and a four-way splitter, which is adapted to receive the first and the second down-link signals and is coupled to distribute the first and the second down-link signals to the first, second, third, and fourth group of the wired telephones, as substantially connect and specific detail and combination.

Consider **claim 25**, prior art record, Ghisler teaches the method according to claim 24, wherein the IF signals are transmitted within an overall IF bandwidth (C6, L54-59, Fig.1, No. 230 Illustrate transmitted within an overall IF bandwidth). However, Ghisler **fail to teach** and wherein the first group of telephones comprises a first telephone which transmits within a first IF bandwidth narrower than the overall IF bandwidth and a second telephone which transmits within a second IF bandwidth narrower than the overall IF bandwidth, as substantially connect and specific detail and combination.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**3. Claims 1, 15 and 29-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano (Patent No. 4,704,733) in view of (Ghisler (Patent No. 5,926,755) and further view of Mani et al. (Pub. No. 2002/0191565).

Consider **claims 1 and 15**, Kawano teaches a base-station transceiver system (BTS) operative in a cellular telephone network, comprising: a main up-link port and a diversity up-link port which are adapted to operate cooperatively to receive up-link signals over-the-air from cellular telephones such that both of the ports receive the up-link signals from each of the cellular telephones (Abstract, C3, L10-20, L61-68, C4, L1-53). Kawano teaches the limitation of claim as discuss **but fail to teach** and which are

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coupled to receive signals from wired telephones, such that the main up-link port receives signals only from a first group of the wired telephones and the diversity up-link port receives signals only from a second group of the wired telephones; and signal processing circuitry which is adapted to receive the signals from the up-link ports and convey the signals over the network.

In an analogous art, Ghisler teaches "Method and an arrangement for conducting multiple calls simultaneously". Further, Ghisler teaches and which are coupled to receive signals from wired telephones, such that the main up-link port receives signals only from a first group of the wired telephones (C4, L9-19, L50-65, teach telephone as first group that up-link port receiving). Kawano and Ghisler teach the limitation but **fail to teach** and the diversity up-link port receives signals only from a second group of the wired telephones; and signal processing circuitry which is adapted to receive the signals from the up-link ports and convey the signals over the network.

In an analogous art, Mani teaches "Method and system employing receive diversity in distributed cellular antenna applications". Further, Mani teaches and the diversity up-link port receives signals only from a second group of the wired telephones; and signal processing circuitry which is adapted to receive the signals from the up-link ports and convey the signals over the network (Abstract, Page 6, Paragraph [0076], Fig.24, No.118, Illustrate as second group of telephone).

Therefore, it would have been obvious at the time that the invention was made that person having ordinary skill in the art to modify Kawano, Ghisler and Mani system, such that a main up-link port and a diversity up-link port which are adapted to operate

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cooperatively to receive up-link signals over-the-air from cellular telephones and main up-link port receives signals only from a first group of the wired telephones, the diversity up-link port receives signals only from a second group of the wired telephones, to provide means for extend/distribution and prevent signal loss.

Consider **claims 29 and 30**, Kawano teaches a telephone adapter, comprising: converter circuitry which is adapted to convert between cellular signals and baseband signals, the cellular signals comprising a first signal communicating with a main up-link port of a base-station transceiver system (BTS) operative in a cellular telephone network, and a second signal communicating with a diversity up-link port of the BTS (C3, L10-20, C61-68, C4, L1-53).

Ghisler teaches a switch unit which is adapted to connect to a wired telephone and to convey the baseband signals between the wired telephone (Fig.2, Illustrate No.340 as a switch unit which connect to a wired telephone) and the converter circuitry (Fig.1b Illustrate No. 210 and 230 as converter); and a control which sets the converter circuitry to convey only one of the first and the second signals, so that in a first setting of the control the wired telephone communicates only with the main up-link port (C4, L9-19, L50-65)

Mani teaches and in a second setting of the control the wired telephone communicates only with the diversity up-link port (Abstract, Page 6, Paragraph [0076]).

Therefore, it would have been obvious at the time that the invention was made that person having ordinary skill in the art to modify Kawano, Ghisler and Mani system,

such that converter circuitry which is adapted to convert between cellular signals and baseband signals and cellular/wire-phone wherein first signal communicating with a main up-link port, second signal communicating with a diversity up-link port of the, to provide means for prevent signal loss or service interruption.

4. **Claims 2-3, 9-10, 16-17, 23-24, 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano (Patent No. 4,704,733) in view of (Ghisler (Patent No. 5,926,755) in view of Mani et al. (Pub. No. 2002/0191565) and further view of Merrill et al. (Patent No. 6,618,353).

Consider **claims 2 and 16**, Kawano, Ghisler and Mani teach the limitation of claim as discuss above **but fail to teach** the BTS according to claim 1, wherein the wired telephones are connected by wire to a cable television (CATV) network, and wherein the signals from the first and the second group of wired telephones are conveyed to the main up-link port and the diversity up-link port via the CATV network.

In an analogous art, Merrill teaches "Router for use with a link that has a set of concurrent channels". Further, Merrill teaches the BTS according to claim 1, wherein the wired telephones are connected by wire to a cable television (CATV) network, and wherein the signals from the first and the second group of wired telephones are conveyed to the main up-link port and the diversity up-link port via the CATV network (Abstract, C3, L63-67, C6, L15-26).

Therefore, it would have been obvious at the time that the invention was made that person having ordinary skill in the art to modify Kawano, Ghisler, Mani and Merrill



system, such that the wired telephones are connected by wire to a cable television (CATV) network, and wherein the signals from the first and the second group of wired telephones are conveyed to the main up-link port and the diversity up-link port via the CATV network, to provide means for keeping signal/communication on when power outage.

Consider **claims 3 and 17**, Merrill teaches the BTS according to claim 2, wherein the main up-link port and the diversity up-link port are coupled by wires to the CATV network so as to receive the signals from the wired telephones (C5, L45-64).

Consider **claims 9 and 23**, Ghisler teaches the BTS according to claim 1, wherein the signals comprise radio frequency (RF) signals, and comprising a BTS converter (BTSC) which is adapted to convert intermediate frequency (IF) signals received from the wired telephones to the RF signals (C6, L53-59, Fig.4, No.210, Illustrate RF demodulator wherein converter IF).

Consider **claims 10 and 24**, Ghisler teaches the BTS according to claim 9, wherein the IF signals are transmitted via a CATV network, and wherein a level of the IF signals is less than or equal to a threshold level of signals in the CATV network (C2, L55-65, C6, L53-59, Fig.1b, Illustrate IF as No.230 are transmitted).

Consider **claims 14 and 28**, Ghisler teaches the BTS according to claim 1,

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wherein at least one of the wired telephones comprises a baseband-telephone which receives and transmits baseband signals, and a telephone adapter which is connected to the baseband-telephone and which is adapted to convert between the baseband signals and the signals received by the main up-link port and the diversity up-link port (C7, L36-66, Fig.2, illustrate telephone adapter which inherently connected to the baseband-telephone).


### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiet Doan whose telephone number is 571-272-7863. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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